FIELD OPERATIONS DIVISION // THE BRIDGE

THE FIELD MEDIC'S MANUAL

Tech Basic Training, Book Two — As Narrated by The Last L0phter

A Combat Medic's Guide to Machines That Won't Cooperate

The Fixes You Learn Before You Ever Need Backup

Check the Vitals. Trust the Basics. Stay a Guardian.

BY ZEALOT45

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DON'T PANIC. IT'S PROBABLY NOT THE MOTHERBOARD.

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Preface — Don't Panic: It's Probably Not the Motherboard

Field Log — Transmission 014: Same Bridge, new patient.

Listen up, recruit. If you made it here from Book One, welcome back — you already know how this works. If this is your first transmission from the Bridge, that's fine too. Grab a seat. This one doesn't require the backstory.

Book One taught you how to protect the human sitting at the keyboard. This one's about the machine underneath your hands. Here's the thing nobody tells you until they've spent fifteen years riding around in the back of an ambulance the way I did: **bodies fail the same way systems fail** — slowly, then all at once, right when nobody's paying attention. A computer that's been "running a little slow" for three months isn't broken. It's presenting symptoms. You just haven't learned to read the chart yet.

That's what this manual is. A chart. A field guide to the calls that show up in my shop, Hak's Home PC Repair, more than anything else combined — the calls that cost people real money because nobody ever showed them the two-minute fix hiding behind the scary error message.

Here's the deal, same as always: none of this is magic, and none of it requires you to be a hacker. It requires you to slow down, read the actual words on the screen instead of panicking past them, and follow a protocol instead of guessing. That's the whole skill. EMTs don't improvise when someone's not breathing — they run a protocol, in order, every single time, because panic is what kills people, not the emergency itself. Same rule applies here. Panic doesn't fix a blue screen. Protocol does.

A few things before you start:

- This manual assumes you can follow instructions and aren't afraid of a menu you've never opened before. That's the whole bar for entry.
- Every fix in here is one you can walk back. Nothing in this book asks you to do something that can't be undone by a reboot, a re-plug, or a phone call.

- When something's genuinely beyond field triage — and I'll tell you exactly when that is — the right move isn't to keep pushing. It's to call for backup. That's not failure. That's the job.

You'll pick up a few **Field Medic Badges** along the way — real transferable skills, not stickers, the kind that turn "I have no idea what's wrong with my computer" into "let me check three things before I panic." Stay skeptical of the scary error message. Stay curious about what's actually happening under the hood. And stay a guardian — of your own hardware, this time, not just yourself.

Let's go read some vitals.

— The Last L0phter

Chapter 1 — Reading the Vitals: The Walking Wounded

Field Log — Transmission 015: The slow bleeds nobody flags as an emergency.

Most of what limps into a repair shop isn't an emergency. It's a patient that's been quietly getting worse for weeks and finally hit the point where "it's just doing that now" stopped being an acceptable answer. Slow computers, apps that crash, a taskbar that freezes — none of it is dramatic. All of it is fixable, usually in under ten minutes, usually for free, if you know where to look.

The walking wounded don't need a trauma team. They need someone who knows how to take a pulse. So before we get to the individual complaints, let's cover the one skill that diagnoses about half of everything in this chapter before you've even opened a fix guide.

Reading Task Manager Like Vitals (Field Medic Badge #1)

Every modern operating system keeps a live readout of what's actually happening inside the machine, and almost nobody looks at it until something's already gone wrong. That's like never checking a pulse until the patient's collapsed. **Task Manager** (Ctrl + Shift + Esc — memorize that combo, it's your stethoscope) is where you find out what's actually eating your CPU, your memory, and your disk, instead of guessing.

- Open Task Manager: Ctrl + Shift + Esc.
- Click the Processes tab, sort by CPU or Memory.
- Right-click anything you don't recognize or don't need, and End Task.
- Click the Startup Apps tab to see what's launching automatically every time you boot.

> **CHALLENGE:** Open Task Manager right now, sort by CPU, and name the top three processes eating it. If you don't recognize two of them, that's not a problem — that's Tuesday. If one is genuinely unfamiliar and spiking hard while you're not doing anything, that's your first real diagnostic read.

The Slow Bleed — "My Computer Is Dying!"

Vitals: everything takes forever to open, fans are spinning, the whole machine feels like it's wading through mud.

Diagnosis: it's almost never a dying patient. Nearly always it's Windows carrying too much weight — too many background apps, a packed hard drive, or software nobody's updated in a year.

FIELD FIX:

1. Run the Task Manager check from Badge #1 above — end anything hogging CPU or memory that you don't recognize.
2. Go to Settings → System → Storage and turn on Storage Sense.
3. Run Disk Cleanup (type "disk cleanup" into the search bar).
4. Uninstall apps you don't use anymore.
5. Run Windows Update — an outdated system runs slower, full stop.
6. Still on a spinning hard drive (HDD)? An SSD upgrade is close to a full transplant: cheap, dramatic, and permanent. It's the single biggest speed fix that exists.

The Seizure — Random Freezing

Vitals: total lockup, no cursor movement, sound looping on whatever was playing when it happened.

Diagnosis: usually overheating, or too many startup apps fighting each other for the same resources.

FIELD FIX:

1. Check your temps (full walkthrough in Chapter 2's Fever Spike section if this keeps happening).
2. Clean the dust out of the fans.
3. In Task Manager, open the Startup Apps tab and disable everything except what you actually use daily.
4. Update your GPU drivers.
5. Run chkdsk /f from an admin Command Prompt — it'll ask to schedule a restart. Let it.

> **WARNING:** If your machine freezes mid-task, resist the urge to yank the power cord immediately. Give it thirty seconds. A freeze isn't always a crash, and pulling power mid-write is one of the few things that can turn a bad day into a corrupted file.

Syncope — Apps Keep Crashing

Vitals: one program (or several) quits without warning, often the same one, over and over.

Diagnosis: usually corrupt files, an outdated version, or antivirus software that's decided to be a little too protective.

FIELD FIX:

1. Update the app itself.
2. Update Windows.
3. Run System File Checker: open Command Prompt as Admin and type sfc /scannow.
4. Reinstall the app if the crashes are isolated to just that one program.
5. Check whether your antivirus is quarantining files the app actually needs.

Catatonia — Windows Explorer Not Responding

Vitals: File Explorer freezes, or the whole taskbar disappears and won't come back.

Diagnosis: Explorer.exe, the process that runs your desktop and file windows, just needs its heart restarted — not the whole patient.

FIELD FIX:

1. Ctrl + Shift + Esc for Task Manager.
2. Find Windows Explorer in the list and click Restart. (Safe — this restarts your desktop and file windows, not the whole PC.)
3. Clear your File Explorer history: File Explorer → View → Options → Clear.
4. If it keeps happening, run sfc /scannow.

Update Purgatory — Windows Update Stuck

Vitals: the update progress ring spins forever, or the machine loops through restarts without ever finishing.

Diagnosis: a corrupted update cache. Windows downloaded a file, choked on it, and is refusing to either finish or let go.

This next move is worth remembering, because you'll use the exact same trick twice more later in this manual — once on Bluetooth in Chapter 3, once on the printer in Chapter 4. Windows runs dozens of background services, and sometimes one just needs to be told to stop, then start again. It's the software equivalent of clearing your throat.

FIELD FIX:

1. Restart the PC. Actually restart — not sleep, not close the lid.
2. Run the Windows Update Troubleshooter: Settings → System → Troubleshoot → Other Troubleshooters.
3. Open services.msc (Win + R, type it), find Windows Update, right-click it, and choose Stop.
4. Delete the contents of C:\Windows\SoftwareDistribution.
5. Back in services.msc, right-click Windows Update again and choose Start. Retry the update.

> **PRO TIP:** Bookmark that last section in your head. "Stop the service, clear its folder, start the service again" is the single most reusable trick in this entire manual.

Chapter 2 — Code Blue: Critical System Failures

Field Log — Transmission 016: When the patient stops breathing.

Everything in the last chapter was the walking wounded — annoying, not urgent. This chapter is different. A machine that won't turn on, or one that's actively crashing to a blue screen, looks like an emergency, and your instinct is going to be panic. Resist it. I've watched people cause more damage in the first sixty seconds of a real emergency, human or digital, than the emergency itself ever would have — because panic makes you skip steps. Real medics run a protocol precisely because the protocol is calmer than you are in the moment. So is this one.

The Power-Cycle Protocol (Field Medic Badge #2)

Before you touch a screwdriver, know this: the vast majority of "my computer is dead" calls aren't the brain — the motherboard or CPU. They're the circulatory system. Power. A loose cable, a dead outlet, a power supply that's finally tapped out. The power-cycle protocol is the CPR of computer repair: it costs you nothing, it can't make things worse, and it fixes an enormous share of "totally dead" machines before you ever crack the case.

THE PROTOCOL:

1. Check the outlet itself — plug in a lamp or your phone charger to confirm power's actually there.
2. Try a different power cable if you have one. Cables die more often than people expect.
3. Hold the power button down for a full 10 seconds, even with everything unplugged. This drains residual charge sitting in the capacitors and forces a real reset, not a resume.
4. Plug back in and try again.

> **WARNING:** If the protocol doesn't bring it back, that's your cue to move to the next section, not to start pulling parts at random. Reseating components is fine once you know how; forcing something that doesn't want to seat is how a $150 problem becomes a $400 problem.

Full Arrest — PC Won't Turn On

Vitals: no lights, no fans, no beep, total silence.

Diagnosis: run the Power-Cycle Protocol above first. If it's still silent after that, you're looking at a connection or component problem, not a dead machine.

FIELD FIX:

1. Run the Power-Cycle Protocol above if you haven't already.
2. Desktop: unplug from the wall completely, then reseat the RAM, reseat the GPU, and reseat the main power connectors. Pull each one gently and push it firmly back in — loose connections are shockingly common, especially after the machine's been moved.
3. Laptop: remove the battery if it's removable, plug directly into wall power, and try booting on wall power alone.
4. Still nothing? This is a call-for-backup situation — see Field Notes at the end of this manual.

Code Blue — The Blue Screen of Death

Vitals: a full blue crash screen, an error code that means nothing to you, a spontaneous reboot mid-task.

Diagnosis: almost always a corrupted driver, a damaged system file, or an overheating component throwing an error the system can't recover from mid-sentence.

FIELD FIX:

1. Restart and boot into Safe Mode: Settings → System → Recovery → Advanced Startup on Windows 11, or tap F8 repeatedly on older systems.
2. Uninstall any drivers or software you installed right before this started. Timing is your best clue here.
3. Open Command Prompt as Admin and run sfc /scannow.
4. Then run DISM /Online /Cleanup-Image /RestoreHealth.
5. Run Windows Update.
6. Check your temps with HWInfo or CoreTemp. A BSOD that only happens under load is almost always thermal — which brings us to the next patient.

Fever Spike — Overheating

Vitals: fans screaming, the case hot to the touch, random shutdowns or a machine that gets slower and slower right before it crashes.

Diagnosis: dust is the number one killer of PCs, full stop. Not glamorous. Just true, the same way most real medical emergencies are boring at their root.

FIELD FIX:

1. Clean the fans and vents with compressed air, outside, unless you enjoy breathing five years of dust.
2. Improve airflow. Give the case room to breathe; don't wedge it into a closed cabinet.
3. Check what's actually hogging the CPU in the background (Task Manager — you know it by now).
4. Laptop: use a cooling pad, and never run it on a bed, couch, or your actual lap for long stretches. That blocks the intake vents completely.
5. Reapplying thermal paste helps, but it means opening the case and working directly on the CPU. If that's further than you want to go, that's a legitimate backup-call, not a failure.

> **MEDIC'S NOTE:** Dust is the single most common thing I find when I open a case that's "randomly" shutting down. Not a virus. Not a dying CPU. Dust, packed so thick it's basically insulation. Compressed air and fifteen minutes fixes more "my computer is dying" calls than anything else in this book.

Chapter 3 — Sensory Failures: When Your Rig Can't See, Hear, or Feel

Field Log — Transmission 017: When the machine loses a sense.

A computer experiences the world through a small set of senses: what it displays, what it plays, what it hears from your keyboard and mouse, and what it picks up over Bluetooth. When one of those senses goes out, people assume the worst — a dying graphics card, a dead motherboard. Almost every time, it's something much smaller and much more fixable.

Check the Physical Layer First (Field Medic Badge #3)

Here's the rule that solves more sensory failures than any driver update ever will: before you troubleshoot the software, check the physical connection. A cable that's ninety percent seated looks completely normal and works not at all. A USB port that's gone flaky will make a perfectly good mouse look broken. Every section in this chapter starts here for a reason — check the physical layer, then move to software.

> **CHALLENGE:** Next time anything on your desk stops responding — screen, speakers, mouse, doesn't matter — touch every cable connected to it before you open a single settings menu. You'll be surprised how often that's the whole fix.

Blurred Vision — Screen Flickering

Vitals: the screen flickers, stutters, or blinks black for a split second, on and off.

Diagnosis: usually a graphics driver arguing with an app, or, less often, a loose display cable.

FIELD FIX:

1. Check the physical layer: reseat the display cable at both ends.
2. Update your graphics drivers (Device Manager will tell you whether you're running NVIDIA, AMD, or Intel).
3. Disable hardware acceleration in whatever app is flickering — Chrome and Discord are the usual suspects.

4. Go to Settings → Display → Advanced and check your refresh rate. A mismatched refresh rate is a sneaky, common cause nobody thinks to check.

Sudden Deafness — Audio Not Working

Vitals: no sound anywhere, or sound coming out of the wrong device.

Diagnosis: Windows is talking to the wrong "ear." Usually it's just picked the wrong output device, or a driver went quiet.

FIELD FIX:

1. Click the speaker icon in the taskbar and confirm it's set to the correct output device.
2. Right-click the speaker icon and run the Audio Troubleshooter.
3. Update your audio drivers.
4. Disable "Exclusive Mode": right-click the speaker icon → Sounds → Playback → your device → Properties → Advanced tab.
5. Restart the Windows Audio service through services.msc — same move from Chapter 1's Update Purgatory section.

Numb Extremities — Keyboard or Mouse Not Working

Vitals: no response from the keyboard or mouse, wired or wireless.

Diagnosis: nine times out of ten it's the port, the batteries, or a driver. Rarely the device itself.

FIELD FIX:

1. Check the physical layer: try a different USB port.
2. Replace the batteries if it's wireless.
3. In Device Manager, find the device, uninstall it, then restart — Windows reinstalls it automatically and often clears whatever was wrong.
4. Actually check for debris jammed under the keys. Compressed air fixes more keyboards than people believe.

Signal Deaf — Bluetooth Won't Pair

Vitals: the device won't connect at all, or connects and then drops a few seconds later.

Diagnosis: Bluetooth on Windows is genuinely held together with duct tape and good intentions. It needs a firmer reset than you'd expect.

FIELD FIX:

1. Turn Bluetooth off, then back on. Actually off, not just out of range.
2. Remove or forget the device completely and re-pair it from scratch instead of trying to reconnect a broken pairing.
3. Update your Bluetooth drivers.
4. Restart the Bluetooth Support Service through services.msc — same move as Chapter 1.

Chapter 4 — Comms Down: Network & Print Failures

Field Log — Transmission 018: When the Signal goes quiet.

Back in Book One, I told you the Bridge only works because the Signal keeps moving — the current of information flowing between you and everything else. Same principle applies at the hardware level. When your own machine loses the Signal, or loses its ability to talk to a printer sitting three feet away, it feels bigger than it is. It's almost never as serious as it looks.

Lost Signal — Wi-Fi Says "Connected, No Internet"

Vitals: full Wi-Fi bars, nothing loads.

Diagnosis: this is almost never your PC's fault. It's the router having what can only be called a full existential crisis.

FIELD FIX:

1. Restart the router. Unplug it, count to thirty, plug it back in. This isn't superstition — it clears the router's memory the same way a reboot clears yours.
2. Go to Settings → Network & Internet → Status → Network Reset.
3. Forget the Wi-Fi network entirely and reconnect from scratch.
4. Update your network adapter drivers.
5. Plug in an Ethernet cable as a test. If wired internet works and wireless doesn't, the problem is isolated to the Wi-Fi radio — either yours or the router's.

Flatline — The Printer Won't Print

Vitals: nothing happens, or it happens forever — stuck "printing" with nothing coming out.

Diagnosis: the Print Spooler, the traffic cop that manages your print jobs, is clogged with a dead job it refuses to let go of.

FIELD FIX:

1. Press Win + R and type services.msc — same move from Chapter 1's Update Purgatory section.

2. Find Print Spooler, right-click it, and choose Stop.
3. Open C:\Windows\System32\spool\PRINTERS in File Explorer.
4. Delete everything inside that folder. You're clearing out stuck jobs, not the folder itself.
5. Back in services.msc, right-click Print Spooler again and choose Start.
6. Send the print job again.

> **MEDIC'S NOTE:** This exact call is the single most common paid house call in this business. Two minutes, one folder, zero dollars — and I mean that as an actual compliment to you for reading this far, not a complaint about my own invoice.

Field Notes: Know When to Call for Backup

Field Log — Transmission 019: Knowing your scope of practice.

A quick word from the guy who actually shows up when this manual runs out of road.

Scope of Practice

In EMS, we call it scope of practice — the line between what you're trained and authorized to do, and what needs a higher level of care. It's not about ability. It's about knowing exactly where your training ends, because that's where mistakes get expensive, or dangerous. Same rule applies here.

- Liquid spilled inside the case, or on the keyboard, and it's still powered on. Cut the power first, then call — don't try to "dry it out and see."
- Any burning smell, smoke, or a component that's visibly hot to the touch. Unplug it immediately. This one's non-negotiable.
- A hard drive making a clicking or grinding sound. Every additional power-on is another chance to lose the data permanently. Stop, don't experiment, call for backup.
- Physical damage — a dropped laptop, a cracked screen, bent pins on a connector.
- Anything that requires opening a power supply. The capacitors inside hold a genuinely dangerous charge even after it's unplugged. That's not hacker-lore caution, it's an actual electrical hazard.
- A machine that's been ransomwared, or is behaving like it's actively compromised. That's a different manual entirely — go re-read Book One.
- You've tried the field fix twice and it didn't stick. Repeating the same failed fix a third time isn't persistence. It's a different symptom you haven't identified yet.

Calling for backup isn't losing. It's the entire point of triage — get the patient to the right level of care, fast, without pretending you're something you're not. That's what Hak's Home PC Repair is for, right here in Worcester, when the fix goes past what's in this book. No shame in the phone call. I've made plenty of them myself, in a very different uniform.

Appendix A — The Triage Chart: Quick-Reference Cheat Sheet

Field Log — Transmission 020: The card you tape inside the case.

Tape this one inside the case. Or screenshot it. Just don't lose it.

Symptom	Likely Cause	Field Fix
Slow / laggy PC	Too many background apps, full storage, outdated software	Task Manager + Storage Sense + Windows Update
Random freezing	Overheating or startup overload	Clean fans + disable startup apps
Apps keep crashing	Corrupt files, outdated version, overprotective antivirus	Update app + SFC + reinstall
Explorer not responding	Explorer.exe needs a restart	Task Manager → Restart Explorer
Windows Update stuck	Corrupted update cache	Clear SoftwareDistribution + retry
Won't turn on	Power issue — cable, outlet, or PSU	Power-Cycle Protocol + reseat components
Blue Screen (BSOD)	Bad driver, corrupt system file, or overheating	Safe Mode + SFC/DISM + temp check
Overheating	Dust, poor airflow	Clean fans + improve airflow
Screen flickering	Driver conflict or loose cable	Update GPU driver + reseat cable
No audio	Wrong output device or driver	Select correct device + update driver
Keyboard/mouse dead	Port, battery, or driver issue	New port + reinstall device
Bluetooth won't pair	Stuck pairing cache or service	Forget device + re-pair + restart service

Symptom	Likely Cause	Field Fix
Wi-Fi connected, no internet	Router glitch, not your PC	Restart router + Network Reset
Printer won't print	Print Spooler jammed with a stuck job	Stop spooler, clear PRINTERS folder, restart spooler

Appendix B — Signature Lines & Lore: Quotable Field Notes

Field Log — Transmission 021: More lore worth remembering.

Humor is the encryption key for your brain — same rule as Book One. Here's the shop-floor version, stripped down and ready for your feed, your wall, or the sign taped above your bench.

Signature Lines

- "Dust is the silent killer of every rig in this city."
- "A reboot isn't giving up. It's resetting the patient's rhythm."
- "Task Manager is a stethoscope. Learn to read it."
- "Check the physical layer before you blame the software."
- "The spooler always dies first."
- "Guardian in the streets, medic in the case."

For When You Need a Laugh

- Why did the hard drive quit its job? Too many unresolved sectors.
- What did the motherboard say to the overheating CPU? "You need to chill."
- Why do printers make terrible secret keepers? They always jam under pressure.

None of this is abstract. It's the same call, on repeat, from the same worried voice on the phone: "it just stopped working and I don't know what I did." You didn't do anything. Machines fail exactly like everything else does — slowly, then all at once — and now you know how to read the chart before you panic.

Glossary: Speak Like a Field Medic

Field Log — Transmission 022: Learn the language, walk the shop floor.

- **BSOD** — Blue Screen of Death; Windows' way of throwing its hands up and refusing to continue. Loud, scary, usually survivable.
- **Safe Mode** — a stripped-down boot that loads only the essentials, so you can fix a problem without the problem fighting back.
- **SFC / DISM** — System File Checker and Deployment Image Servicing and Management; two built-in tools that scan for and repair damaged Windows files.
- **Print Spooler** — the traffic cop for print jobs. When it jams, nothing gets through, even if the printer itself is fine.
- **Task Manager** — the vitals monitor for your PC. CPU, memory, disk, and startup apps, all in one place.
- **Device Manager** — the full roster of every piece of hardware Windows knows about, and where you go to reinstall a misbehaving driver.
- **chkdsk** — "check disk"; scans your storage drive for errors and repairs what it can.
- **services.msc** — the control panel for every background service Windows runs. Ninety percent of "stuck" problems live here.
- **Exclusive Mode** — a setting that lets one app hog your audio device entirely, locking everything else out.
- **Thermal paste** — the material between your CPU and its cooler that actually transfers heat. Dries out over years; replacing it is a real fix, not folklore.
- **HDD / SSD** — spinning hard drive vs. solid-state drive. One has moving parts and gets slower with age. One doesn't, and doesn't.
- **Storage Sense** — Windows' built-in janitor; quietly clears temp files and reclaims space if you let it.

- **Refresh rate** — how many times per second your screen redraws. A mismatched setting causes exactly the kind of flicker that looks like a hardware failure and isn't.

Final Orders

Field Log — Transmission 023: Last transmission, for now.

You picked up this manual because something broke, or because you got tired of paying someone else to fix the same five things over and over. Either reason is a good one.

Every fix in this book runs on the same principle triage always has: stay calm, check the obvious thing first, and don't skip steps because you're in a hurry. That's not a lesser skill than hacking. In my experience it's the harder one — because the hard part was never the syntax. It was staying calm enough to read it correctly.

You started this one a recruit who panics at a blue screen. You're leaving it someone who reads a blue screen. That's the whole upgrade.

Stay calm. Check the cable. Call for backup when it's actually time to. That's it. That's the job.

See you in Book Three.

— The Last L0phter